Data acquisition for analytical platforms: Automating scientific workflows and building an open database platform for chemical anlysis metadata

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DATA ACQUISTION FOR ANALYTICAL PLATFORM

AUTOMATING SCIENTIFIC WORKFLOWS AND BUILDING AN OPEN DATABASE PLATFORM FOR CHEMICAL ANALYSIS METADATA

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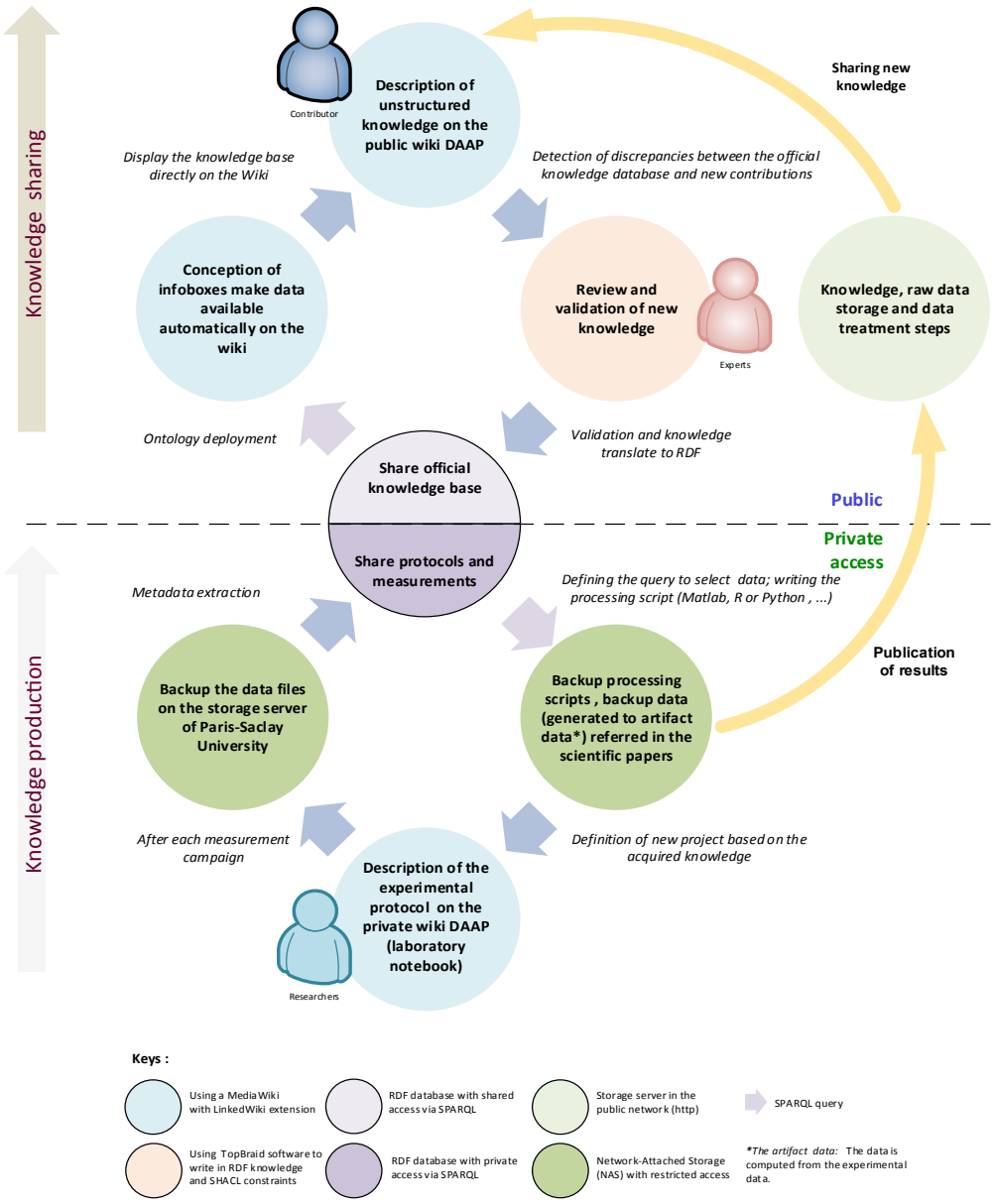
TARGET: The project DAAP "Data Acquisition for Analytical Platform" engages the collaboration in the Analytical Chemistry research community. The platform allows shared data among scientists by accessing private Linked Database Platform (LDP) or public Linked Database Platform. The first step is to reference the resources available to researchers using a wiki, to define the ontology by the domain scientists and to benefit from Linked Data technologies.

PERSPECTIVE: open data access, relevant information extraction, data fusion

Efficient knowledge production with the scientific community



Step 1: Protocols are described on the private wiki DAAP by the researcher.

Step 2: Experimental data is stored within the University server.

Step 3: A plugin extracts the metadata from experimental data, imports the metadata into the RDF database and links metadata to the domain ontology.

Step 4: Researchers can simultaneously query the data in the database according to the domain ontology and find the related experimental data.

Step 5: After publishing a paper, data and knowledge are available on the public wiki DAAP.

Step 6: Experts organize a meeting to review and validate the shared new knowledge and the shared resources according to the domain ontology.

Step 7: Researchers can query the domain ontology using Linked Data technologies.

Step 8: The ontology is presented as an infobox within wiki DAAP pages. In case of disagreement, users can change it. The divergence in ontology will then be discussed in step 6.

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